PREFACE

The penetration of rigorous thinking in many areas of human activity—a phenomenon taking place with unprecedented intensity in our times—has lead to the emergence of a number of new research areas using mathematics. And to the development of mathematics.

The rôle played by discrete mathematics in this process is essential. The mathematical tools used in fields like switching and automata theory, in network theory, in discrete optimization, in utility theory, in the study of preference relations, as well as in numerous other fields of current research, are predominantly combinatorial. These tools have rapidly outgrown the initial level of simplistic shortcuts discovered by clever amateurs, and have reached high levels of mathematical sophistication. And if a substantial part of combinatorial theory continues exhibiting freshness, this is perhaps due to its multiple ties to a real world having a combinatorial nature.

The growth of knowledge in discrete applied mathematics has frequently occurred in the same time with the development of certain areas of activity using mathematics. Consequently, the problems, the directions, the concepts, and even the terminology of certain chapters of discrete applied mathematics were borrowed from the arreas they served. Sometimes these chapters appeared independently of each other, and had a parallel development, often ignoring the results obtained elsewhere, and producing results ignored by others. However, the (philosophically remarkable) mathematical commonness of the basic concepts investigated in these different chapters, and the striking unity of their methods, can and do provide a solid foundation for their successful interaction. Or should we say integration?

Discrete mathematics can preserve its vigour by extending its applicability, and can enhance its power by exploiting its mathematical unity. With these possibilities in mind, and with the aim of providing a meeting place for researchers working on different aspects of discrete applicable mathematics, related to its different areas of application, we would like to introduce DISCRETE APPLIED MATHEMATICS. And to all of us who might have an interesting new result, which is Discrete, is Applied, and is Mathematics, a cordial

DAM it!

The Editor.